



Atty. Dkt. No. 032026-0775

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Hamers et al.

Title: NANOCYLINDER-MODIFIED SURFACES

Appl. No.: 10/773,753

Filing Date: 02/06/2004

Examiner: Unknown

Art Unit: 1651

<b>CERTIFICATE OF MAILING</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below.	
<i>Michelle Manning</i> (Printed Name)	
<i>Michelle</i> (Signature)	
July 7, 2004 (Date of Deposit)	

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document, except as noted below, is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The USPTO has waived the requirement under 37 CFR 1.98(a)(2)(i) to submit copies of U.S. patents and U.S. patent application publications when citing and submitting an Information Disclosure Statements in a patent application filed after June 30, 2003 and in an international application that has entered the national stage under 37 USC §371 after June 30, 2003. Accordingly, copies of these types of documents are not being supplied in connection with this application. Reference is being made to Pre-OG Notice from Office of Patent Legal Administration dated July 25, 2003, *Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003.*

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

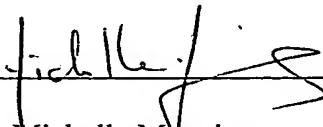
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350.

Respectfully submitted,

Date July 7, 2004

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O I P E INFORMATION DISCLOSURE CITATION JUL 12 2004 (Use several sheets if necessary)		APPLICANT Hamers et al.	
		FILING DATE 02/06/2004	GROUP ART UNIT 1651

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE
		US 6,159,742	12/12/2000	Lieber, et al.			
		US 6,203,814 B1	3/20/2001	Fisher, et al.			
		US 6,362,011 B1	3/26/2002	Massey, et al.			
		US 6,383,923 B1	5/7/2002	Brown, et al.			
		US 2002/0117659 A1	8/29/2002	Lieber, et al.			
		US 2003/0172963 A1	11/21/2002	Kelley, et al.			
		US 6,495,324 B1	12/17/2002	Mirkin, et al.			
		US 2003/0012723 A1	1/16/2003	Clarke			

## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Elghanian, et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-dependent Optical Properties of Gold Nanoparticles," <i>Science</i> , Vol. 277, pp. 1078-1081, Published 1997.
	Hulteen, et al., "A General Template-based Method for the Preparation of Nanomaterials," <i>J. Mater. Chem.</i> , Vol. 7, No. 7, pp. 1075-1087, Published 1997.
	Guo, et al., "Immobilization and Visualization of DNA and Proteins on Carbon Nanotubes," <i>Advanced Mater.</i> , (10) No. 9, pp. 701-703, Published by Weinheim, 1998.
	Wong, et al., "Covalently Functionalized Nanotubes as Nanometre-sized Probes in Chemistry and Biology," <i>Nature</i> , Vol. 394, pp. 52-55, Published by Macmillan Publishers Ltd, 1998.
	Strother, et al., "Synthesis and Characterization of DNA-Modified Silicon (111) Surfaces," <i>J. Am. Chem. Soc.</i> (122), pp. 1205-1209, Published by American Chemical Society, 2000.
	Chen, et al., "Noncovalent Sidewall Functionalization of Single-Walled Carbon Nanotubes for Protein Immobilization," <i>J. Am. Chem. Soc.</i> (123) pp. 3838-3839, Published by American Chemical Society, 2001.
	Nicewarner-Pena, et al., "Submicrometer Metallic Barcodes," <i>Science</i> , 294, pp. 137-141, Published by J Am Chem Soc., October, 2001.
	Mbindyo, et al., "Template Synthesis of Metal Nanowires Containing Monolayer Molecular Junctions," <i>J Am Chem Soc.</i> (124) pp. 4020-4026, Published by American Chemical Society, 2002.
	Zhao, et al., "Water-Soluble and Optically pH-Sensitive Single-Walled Carbon Nanotubes from Surface Modification," <i>J. Am. Chem. Soc.</i> (124) pp. 12418-12419, Published by American Chemical Society, 2002.
	Baker, et al., "Covalently Bonded Adducts of Deoxyribonucleic Acid (DNA) Oligonucleotides with Single-Wall Carbon Nanotubes: Synthesis and Hybridization." <i>Nano Letters</i> , Vol. 2, No. 12, pp. 1413-1417, Published by American Chemical Society, 2002.
	Perez, et al., "DNA-Based Magnetic Nanoparticle Assembly Acts as a Magnetic Relaxation Nanoswitch Allowing Screening of DNA-Cleaving Agents," <i>J. Am. Chem. Soc.</i> , Vol. 124, No. 12, pp. 2856-2857, Published by American Chemical Society, 2002.
	Shim, et al., "Functionalization of Carbon Nanotubes for Biocompatibility and Biomolecular Recognition," <i>Nano Letters</i> , Vol. 2, No. 4, pp. 285-288, Published by American Chemical Society, 2002.

		"IBM Scientists Develop Carbon Nanotube Transistor Technology," <a href="http://www.ibm.com/news/2001/04/27.phtml">www.ibm.com/news/2001/04/27.phtml</a> , printed on 1/28/2003.
		Baker, <i>et al.</i> , "Covalently-linked Adducts of Single-walled Nanotubes with Biomolecules: Synthesis, Hybridization, and Biologically-Directed Surface Assembly." <u>Mat. Res. Soc. Symp. Proc.</u> Vol. 737, pp. F4.6.1-F4.6.7. Published by the Materials Research Society, April, 2003.
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>
<p>* <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.</p>		